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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,286

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Kwang-Yun Cho

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05/20/2009

Baker & Hostetler LLP  
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EXAMINER

KLINKEL, KORTNEY L

ART UNIT

PAPER NUMBER

1611

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,286	<b>Applicant(s)</b> CHO ET AL.	
	<b>Examiner</b> Kortney L. Klinkel	<b>Art Unit</b> 1611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/5/2009</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status***

Acknowledgement is made of the remarks and amendments filed 4/6/2009. Claims 1-5 are pending in the instant Office action. Claims 1, 2 and 5 were amended. Claims 4-5 remain withdrawn pursuant to 37 CFR 1.142(b) as being drawn to nonelected subject matter. This restriction requirement was made final in the Office action dated 12/5/2008. Applicant is reminded that as stated in the Election/Restriction requirement dated 7/23/2008, should the product claims be found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined. Claims 1-3 have been examined to the extent that they read on a polyoxyethylene-based nonionic surfactant which has an aliphatic alcohol, a fatty acid or triacyl glyceride as lipophilic moiety containing at least 8 carbon atoms and a polyoxyethylene as hydrophilic moiety having 3 to 25 oxyethylene repeating units.

### ***Information Disclosure Statement***

Acknowledgement is made of applicant's submitting an information disclosure statement on 5/5/2009. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

***Withdrawn Claim Rejections***

***Claim Rejections - 35 USC § 102***

The rejection of claims 1-2 under 35 U.S.C. 102(b) as being anticipated by Kim et al. (US 6552080, as per applicants' IDS) as evidenced by the Sigma® (product information sheet for Tween®20, updated May, 2003) is withdrawn in light of applicant's claim amendments which exclude the presence of Tween®20 as an adjuvant by narrowing the adjuvant definitions.

***Claim Rejections - 35 USC § 103***

The rejection of claim 3 under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 6552080, as per applicants' IDS) as evidenced by the Sigma® (product information sheet for Tween®20, updated May, 2003) is withdrawn in light of applicant's claim amendments which exclude the presence of Tween®20 as an adjuvant by narrowing the adjuvant definitions..

***Claim Rejections - 35 USC § 112 1<sup>st</sup> Paragraph***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which

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was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The application fails to provide support for the phrase: “a polyoxyethylene-based nonionic surfactant **consisting of**: a lipophilic moiety being an aliphatic alcohol, a fatty acid or a triacyl glyceride, containing at least 8 carbon atoms, and a hydrophilic moiety being a polyoxyethylene having 3 to 25 oxyethylene repeating units” (emphasis added) in instant claims 1 and 2. The Examiner carefully studied the specification and the claims and can find no support for this amendment. The language used in the specification, page 3, second paragraph states, “polyoxyethylene-based nonionic surfactants **which has** an aliphatic alcohol, a fatty acid or triacyl glyceride as a lipophilic moiety containing at least 8 carbon atoms and a polyoxyethylene as a hydrophilic moiety having 3 to 25 oxyethylene repeating units .” Similarly, the language at page 4, second paragraph states the same thing. The claims as originally filed recited the more generic, polyoxyethylene alkyl ester.

The transitional phrase “consisting of” excludes any element, step, or ingredient not specified in the claim. In re Gray, 53 F.2d 520, 11 USPQ 255 (CCPA 1931); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948) (“consisting of” defined as “closing the claim to the inclusion of materials other than those recited except for impurities ordinarily associated therewith.”). Therefore, the claims as currently amended exclude, for example, the sorbitan functionality found in the nonionic surfactant Tween®20 between the fatty acid and the polyoxyethylene group. There is no support for this amendment in the specification or claims as originally filed. The language found in the

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specification (“which has” or “having”), however, is not necessarily closed language and can therefore allow for the presence of, for example, a sorbitan unit or any other unit present in the non-ionic surfactant as long as the resulting molecule has both a polyoxyethylene group and a lipophilic moiety which is either an aliphatic alcohol, a fatty acid or a triacyl glyceride and is a non-ionic surfactant.

It is noted, that page 6, final paragraph of the specification lists specific examples of surfactants, some of which fall within the newly added claim requirements for a nonionic surfactant. Applicant certainly has written description and support for these specific surfactants, however, this relatively small listing of examples cannot provide support for the broader genus “a polyoxyethylene-based nonionic surfactant **consisting of**: a lipophilic moiety being an aliphatic alcohol, a fatty acid or a triacyl glyceride, containing at least 8 carbon atoms, and a hydrophilic moiety being a polyoxyethylene having 3 to 25 oxyethylene repeating units”.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 6552080, as per applicants' IDS) as evidenced by the Sigma® (product information sheet for Tween®20, updated May, 2003) in view of Capuzzi et al. (US 5905072 as per applicants' IDS).

Kim teaches the agrochemicals of formula (I) and formula (II) (compounds 40 and 64 respectively). Kim also teaches a fungicidal composition comprising these compounds and an adjuvant, namely Tween®20, which is a nonionic surfactant which is a polyoxyethylene derivative of sorbitan monolaurate. It has a calculated molecular weight of 1225 daltons, which assumes 20 ethylene oxide units (Sigma® product information sheet for Tween®20). Tween®20 is a polyoxyethylene alkyl ether and more specifically is a polyoxyethylene-based nonionic surfactant which has an aliphatic

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alcohol, a fatty acid or triacyl glyceride as lipophilic moiety containing at least 8 carbon atoms and a polyoxyethylene as hydrophilic moiety having 3 to 25 oxyethylene repeating units. The fungicidal composition of Kim contains a ratio of agrochemical to adjuvant of 1:1 to 1:2 (column 51, lines 25-45). The fungicidal efficacy of a composition comprising the compound of formula (I) and a compound of formula (II) with the Tween®20 adjuvant can be seen in Table 9, please refer to compounds 40 and 64.

Kim also teaches that a fungicidal composition can comprise one or more of the compounds of formula (I) (column 15, lines 8-10). These compositions can be in combination with a permeating agent (i.e. an adjuvant) such as nonionic, anionic or cationic interface active agents such as fatty acid sodium salts, polyoxy alkyl esters, alkyl sulfonate esters) *inter alia* (column 15, lines 31-35).

Kim fails to teach an adjuvant as necessitated by the instant claims, but rather teaches the adjuvant comprising Tween®20.

Capuzzi et al. teach various adjuvant compositions for fungicides which improve the activity of systemic fungicides belonging to different chemical groups (abstract). Capuzzi also teaches that "[i]t is common practice in agriculture to use many systemic fungicides, characterized by a high specificity, together with products, known as adjuvants, for improved and/or modifying their physico-chemical characteristics...[t]hey [adjuvants] give the fungicide positive effects such as greated coverage and endurance onthe leaves, better penetration of the fungicide into the leaves and movement through the plant As well as enforcing its fungicidal activity." (col. 1, lines 8-17). The adjuvant comprises methyl esters of fatty acids, including methyl esters of colza oil, which are



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fatty acid alkyl esters (col. 2, lines 8-13), anionic surface-active agents including dioctylsulfosuccinate and its salts (col. 2, line 38), non-ionic surfactants including polyethoylated tristyrylphenol (col. 2, line 50), as well as surfactants produced through the condensation of an ethylene oxide with a fatty alcohol(i.e. decyl, tridecyl, lauryl or stearyl alcohol), having between 5 and 10 ethylene oxide units (col. 2, lines 63-67), and polyethoxylated sorbitan esters including sorbitan monooleate 20 EtO, (i.e. Tween®20 col. 3, line 3), among others. The adjuvant compositions of Capuzzi et al. have a synergistic effect on the activity of systemic fungicides belonging to different chemical groups (col. 1, lines 41-42, see also examples). Examples of these chemical groups include fungicides belonging to the group of triazolic, imidazolic, morpholinic, dicarboxyimidic, piperadinic and acylalaninic (col. 3, lines 27-38). Composition A (col. 4, lines 47-58) gives a specific adjuvant composition comprising methyl esters of the fatty acid colza oil (i.e. Diesel Bi®), and dioctyl sulfosuccinate, among other surfactants. Capuzzi also teaches that the fungicidal adjuvant composition can contain a second active agent fungicide or insecticide or fertilizer, etc. (col. 4, lines 30-38).

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to arrive at the instant fungicidal composition comprising an agrochemical of formula (I) and/or formula (II) and adjuvant with a reasonable expectation for success. One would have been motivated to substitute the Tween®20 adjuvant for one or more of the surfactant adjuvants as disclosed in Capuzzi because Capuzzi teaches that Tween®20 (sorbitan mono-oleate 20 EtO, col. 3, line 3) is a functionally equivalent non-ionic surfactant to surfactants produced through the

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condensation of an ethylene oxide with a fatty alcohol (i.e. decyl, tridecyl, lauryl or stearyl alcohol), having between 5 and 10 ethylene oxide units. It is *prima facie* obvious to substitute one art recognized equivalent for another. Furthermore, one of ordinary skill in the art would be imbued with the reasonable expectation that the resulting fungicide/adjuvant mixture would result in a successful composition having improved systemic fungicidal activity. One would have this expectation since Capuzzi teaches that adjuvants, particularly those discussed above, improve systemic fungicidal activity resulting from greater coverage and endurance on the leaves. Furthermore, one of ordinary skill in the art would expect the resulting fungicide/adjuvant composition to exhibit a synergic effect on the activity of the instantly claimed systemic fungicides since this is a known benefit of the adjuvant portion of the composition and the instant fungicides are systemic in nature (as evidenced by the examples).

With respect to claim 3, which requires the presence of another agrochemical for preventing or treating plant diseases, both Kim and Capuzzi, as discussed above teach that it is well known in the fungicidal art to combine active ingredients. Accordingly, it would be obvious to one of ordinary skill in the art to combine one of them with one or more of the other compounds, with a reasonable expectation for success. "It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). One of ordinary skill in the art would be imbued with the

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reasonable expectation that the combination of the known fungicide of formula (I) and/or formula (I) in conjunction with another known fungicide or insecticide or fertilizer, etc. would result in a composition also being useful for preventing plant disease.

Applicant's data in the specification has been considered. Applicant reports several examples of the fungicidal activity of formula (I) or formula (II) both in water and with a surfactant (i.e. an adjuvant). The compositions comprising the adjuvant show better systemic fungicidal activity than those merely containing water as a carrier. This finding is what would be expected given the teachings of the prior art. The adjuvants of Capuzzi et al., which are the same as those of the examples, are known to enhance systemic fungicidal activity. Applicant has provided no evidence of unexpectedness.

### ***Response to Arguments***

Applicant's arguments filed 4/6/2009 in response to the rejection of claims over Kim et al. have been fully considered, but are moot in light of the new grounds of rejection necessitated by applicant's claim amendment to narrow the definition of the adjuvant, which now excludes the presence of Tween®20 alone as the adjuvant. The new claim rejection in further view of Capuzzi et al. teach all the limitations of the claims.

### ***Conclusion***

Claims 1-3 are rejected. No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kortney Klinkel, whose telephone number is (571)270-5239. The examiner can normally be reached on Monday-Friday 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached at (571)272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KLK

/Sharmila Gollamudi Landau/  
Supervisory Patent Examiner, Art Unit 1611